

Peters (G. L.) compliments

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H I N T S  
ABOUT THE  
NATURE AND TREATMENT  
OF THE SIMPLEST FORM OF  
BRIGHT'S DISEASE.

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For the basis of this article I commence with the assumption that simple suppression of perspiration may induce the first stage of Bright's disease. It has been well said, that the important influence which the temperature and secretions of the skin exert upon the kidneys is a part of every man's personal experience; but nothing illustrates this more strikingly than the experiments which completely suspend the cutaneous excretions. Thus: Dr. Styles had the fur of a rabbit removed and covered the skin with a coating of collodion; in an hour or two the urine became *albuminous*. Again, Carpenter says: a partial suppression by the same means gives rise to febrile symptoms and albuminuria.

A large number of cases of Bright disease arise from simple exposure to cold and wet; and many more occur after attacks of scarlet fever, with or without exposure to cold, although Dr. Clark says the opinion is universal that it is exposure of the surface of the body to cold air which produces the dropsy and other symptoms of Bright's disease after scarlatina, and he does not doubt that this belief is well founded in the main. But in scarlet fever, in addition to suppression of the functions of the skin, we have a blood-poisoning, while the kidneys may

be found not only remarkably congested, but their secretory and tubular surfaces may become the seat of a similar vascular injection or efflorescence to that existing in the vascular rete of the skin; and this eruption on the surfaces of the uriniferous tubes and the associated swelling and congestion of these organs may either impede, interrupt, or altogether suppress the functions of the urinary excretion, and thereby occasion an accumulation of excremential and contaminating materials in the blood. (*Copland.*) The affection of the kidneys may, in fact, transcend that which occurs on the skin in scarlet fever, and almost rival that which can so often be observed on the throat. In scarlet fever an acrid and even corrosive narcotico-alkaloidal poison, like that which exists in the rhus toxicodendron, belladonna, stramonium, turpentine or cantharides, may produce its ravages upon the blood, skin, mucous membranes, kidneys, and nervous system. But simple suppression of perspiration may also induce blood-poisoning, for large quantities of chloride of sodium, acetic and *formic* acids, urea, carbonic acid, and nitrogen gases, and other acrid substances, are naturally excreted from the healthy skin. This may be dwelt upon much more fully in another article; at present I wish to refer almost exclusively to the retention of watery fluid and vapor which a check of perspiration induces. Lavoisier and Seguin found the average quantity of simple watery fluid lost by cutaneous perspiration during 24 hours amounted to nearly 2 lbs. avoirdupois. Dalton assumes that  $25\frac{1}{2}$  ounces is the normal quantity for an adult man, while laborers in gas-works have been known to lose  $3\frac{1}{2}$  lbs. in weight by cutaneous and pulmonary exhalations in *one* hour; finally, Funke has produced a forced perspiration amounting to the rate of from 10 to 26 lbs. in 24 hours. Thus, a sudden check of perspiration may cause an absolute retention of many ounces or even pounds of water in the system; and it is an almost equally well known fact that a great increase in the proportion of water alone in the blood has a tendency to produce oedema. Dropsy has been induced artificially by the injection of pure water into the blood vessels; for Poiseuille and Goodfellow, who have often attempted to force water through the capillary network of an organ, found that this simple fluid injected into the arteries



did not return quickly by the veins, as it does in the case of glutinous saline injections ; but, on the contrary, a great part of it escaped into the tissues and produced a local dropsy. On adding albumen to the water, or employing normal serum, this infiltration did not occur, showing clearly that albumen alone, when in normal quantity, may hinder to some extent the effusion. Again, it is absolutely necessary that the albumen should be in sufficient quantity ; for if the water be in excess, the fluid will still filtrate through the tissues. Hence it is evident that a watery condition of the blood, or a great diminution of its albumen, is eminently calculated to facilitate the escape of serum through the capillary vessels ; in short, favor the occurrence of dropsy.

*The simplest form of Bright's disease.*—In this variety the kidney is merely *dropsical*, anasaruous or œdematous ; its tissues and tubes are simply infiltrated by a greater quantity of fluid. After death we find a large, flabby, more or less sodden, *watery* kidney ; serum drops from it in large quantity when a section is made of it ; its vessels are turgid with a thick red blood that has been deprived in a great measure of its serum. Goodfellow, whose description has been quoted above, is certain that the œdematous condition of the kidney *precedes* the general anasarca, and thinks that in the most recent and purest cases of Bright's disease it would not be very wide of the truth to say that they are merely cases of parenchymatous dropsy of the kidney.

This dropsical affection of the kidney is analogous to the *œdema of the lungs*, which so often occurs in uræmia. Dr. Clark has seen several cases in which the lung, when struck with the finger, trembled like a jelly, and gave the sensation of fluctuation when percussed—so great was the amount of water it contained. From exposure to cold, or from local nervous debility, or paralysis, this dropsy of the lungs may commence and reach its height in ten minutes, and produce an amount of dyspnœa that seems to threaten life ; it may continue for one, two, or three hours, and then abate, if free action of the skin or kidneys takes place ; or it may persist for days, or destroy life in a much shorter time ; or subside and recur at the same hour the next day, or at a distant period, always presenting the same

threatening aspect. I have seen it occur and prove fatal in a few hours from the patient taking a short walk on a raw, cold, wintry day. Uræmia alone can induce it, although conjoined heart disease is a more common and efficient cause.

The effects of dropsy of the kidney are comparable to those of œdema of the parenchyma of the lungs; there is the same pressure on the substance of the organ, and upon its vessels, tubes and nerves. A partial or complete paralysis of the renal nerves may thus be brought about, just as paralysis of the legs occurs from dropsy of the spinal theca.

*Treatment.*—The mildest and the most active *diaphoretics* may be useful or required in this variety. Wood truly says: They deplete from the blood vessels, and sometimes very copiously. It is not only the watery parts of the blood that are carried off under their influence, but some of the salts, and, to a certain extent, the organic constituents also. They promote absorption by their depletory influence, and, on this principle, are sometimes used very happily in *dropsy*; he has known severe dropsy to yield to this class of medicines, in which diuretics had been employed without effect. Again, he continues: It sometimes happens that the skin falls into an inactive or torpid state, and ceases to perform its functions properly; in consequence of which the blood may become impure, and various internal irritations, whether of a vascular or nervous character, may arise. Here is an obvious indication for the use of diaphoretics, especially those of a somewhat stimulating character. Wood admits three varieties of diaphoretics, viz.:

1st. *Nauseating diaphoretics*, like tartar emetic, ipecac, sanguinaria and lobelia.

2d. *Refrigerant diaphoretics*, including citrate of potash, acetate of ammonia, &c.

3d. *Stimulating diaphoretics*, such as prickly ash, Virginia snake root, &c.

Pereira also describes several varieties, viz.:

1st. *Alkaline and saline diaphoretics*, such as the acetate and carbonate of ammonia, the alkaline citrates and tartrates, sal ammoniac, nitrate of potash, and other salts of the alkalies, all of which are frequently used to promote perspiration.



2d. *Nauseating diaphoretics*, such as tartar emetic and ipecac, which are most useful in febrile, acute congestive, or inflammatory disorders, and are preferable to the opiate diaphoretics when there is inflammation or congestion of the brain, or tendency thereto; he thinks the diaphoretic powers of ipecac to be considerably less than is commonly supposed, and that Dover's powder owes its powers of producing sweating almost exclusively to the opium it contains.

3d. *Opiate diaphoretics*, which he thinks have a remarkable tendency to produce sweating, and that in diabetes and granular disease of the kidneys, (?) Dover's powders is the best sudorific we can use, especially when conjoined with the warm bath. Opium and camphor are also mentioned as a serviceable sudorific compound.

4th. *Oleaginous and resinous diaphoretics*, such as sassafras, camphor, mezereum, guaiacum, copaiva, and the turpentine.

Beck only mentions tartar emetic, acetate of ammonia, citrate of potash, ipecac, eupatorium perfoliatum or bone-set, asclepias tuberosa, and aristolochia serpentaria as diaphoretics. Ables selects dulcamara, mezereum, viola tricolor, aconite, rhus toxicodendron, rhododendron chrysanthemum, pulsatilla, and phosphorus as the most reliable sudorifics. Other authors speak of *alterative diaphoretics*, such as sassafras, mezereum, guaiac and sarsaparilla. We now pass to the consideration of the individual remedies of this class.

1. *Citrate of potash*.—Wood asserts that when the skin is hot and dry, and the circulation accelerated, there is no diaphoretic which operates more certainly and effectually; he regards it as more certain than tartar emetic as a mere sudorific; says it allays nausea and thirst with promptness, lowers the pulse, heat of skin, and induces perspiration, as well as promotes the secretion of the kidneys. When a strong sedative impression on the circulation is desired,  $\frac{1}{12}$  or  $\frac{1}{8}$  grain of tartar emetic may be added to each dose, or a few drops of aconite; when there are nervous symptoms, such as morbid vigilance, muscular startings, twitchings, etc., Hoffman's anodyne or sweet spirits of nitre may be combined with it. Wood thinks it greatly superior to the spiritus mindereri, both in diaphoretic power, and for calming irritability of the stomach; it is

one of the most effective anti-emetic remedies, and he knows nothing equal to it in fever with a disposition to frequent vomiting. In his earlier practice he used the acetate of ammonia a great deal, but found it almost uniformly so much inferior to the citrate of potash, and so much less acceptable to the patient, that he has long ceased to give it, except in exceptional cases. It should always be made from the juice of good, fresh, sound, and very sour lemons; of which about 4 fluid ounces should be gradually saturated with bicarbonate of potash, the salt being added slowly, till all effervescence ceases. Dose, a tablespoonful every one, two, or four hours. It is doubtless as efficient as the tartrate of potash. The addition of a small quantity of syrup of orange peel renders it much more acceptable.

2. *Solution of acetate of ammonia, or spiritus mindereri.*—For some readily accountable reasons this remedy has been used far more frequently than the citrate of potash; it certainly has cheapness and disagreeableness in its favor; the former may be a sufficient excuse in hospital practice, and in countries far removed from intercourse with the tropics. It is undoubtedly an efficient remedy, especially the German preparation, which is very much stronger than the English or American formula, but is used in one or two drachm doses, instead of by the tablespoonful, as with us. It is thought to be particularly useful in the dropsies which occur after scarlet fever and measles, although Todd has also recommended it in inflammatory dropsies. Richter found it most valuable for its diaphoretic properties; he thinks it first renders the pulse somewhat fuller and more frequent, and augments the general activity and warmth of the skin until sweat breaks out, when these symptoms decline, and coolness and relaxation occurs; when it does not act upon the skin it augments the secretions from the lungs and kidneys. Dierbach pronounces it one of the most powerful and certain means for the production of perspiration. It is sometimes given alone, but more frequently combined with 10, 15, or 20 drops of wine of antimony to each dose, or with equal quantities of wine of ipecac, or with from one to three drops of aconite, or with spirits of nitre. Drs. Swett Metcalf, Bulkley, and Jos. M. Smith treated 25 cases of Bright's



disease by the hot vapor bath and spirits mindereri and ipecac; of these, seven recovered, twelve were relieved, one was somewhat improved, and five died. It is evidently best adapted for mild and recent attacks; still it has overcome some obstinate and chronic cases, even those occurring in elderly persons, when given in full doses, say two ounces daily of the German preparation, and followed up for several weeks. As there are few remedies which are so successful as a teaspoonful or two of this solution in sick headaches, and as it speedily puts an end to the phenomena of drunkenness in alcoholic intoxications, it may prove useful in some of the head affections of Bright's disease. When the hydræmia is somewhat lessened, Basham gives the liquor ammoniæ acetatis in a combination which he thinks both agreeable and efficacious, viz.: in conjunction with acetic acid and the muriate tincture of iron. He has reason to think this formula more effective than when the same ingredients are given separately. The spiritus mindereri must first be rendered acid, by the acetic acid, before the muriate tincture is added, otherwise the ammonio-chloride of iron is precipitated, and is with difficulty redissolved in an excess of acetic acid. He prefers the following prescription:

Liq. ammon. acet. - - - - - 3j.

Acidi acetici dilut. - - - - gutt xx

Tinct. ferri sesquichloridi - gutt x

to be given in an ounce of water three times a day.

*The Acid Elixir of Haller, or Elixir vitrioli Mysichti*, has cured several cases of Bright's disease, marked by swelling of the face, hands, limbs, and abdomen, very scanty and albuminous urine, dropsy of the chest, and œdema of the lungs, with inability to lie down, and severe suffocative attacks. Dose, ten drops every hour, in urgent cases, given in wine or gin and water; or twenty to thirty drops several times a day.

*Vinegar*.—With a view to its refrigerant and diuretic properties, it has sometimes been used in dropsy. Dr. Gregory, of North Carolina, employed it with great success in the quantity of a pint daily. Simpson's recommendation should not be forgotten. A Dr. Beyer has treated six cases with wine vinegar alone; he gave tablespoonful doses every one or two

hours; in the course of three or four days profuse general perspiration would set in, followed by three or four fluid stools per day, and very copious diuresis; recovery took place in about three weeks, and about one and a half or two quarts of vinegar were used in each case. Cases occurring after scarlet and intermittent fever have recovered under its sole use; the appetite usually improved while using it, and the remedy was generally taken readily until a cure was nearly effected, when it became distasteful; still the progress of the improvement continued unabated, and a perfect cure was accomplished without the aid of other medicines.

*Lemon juice.*—Frank reports six cases either permanently or temporarily cured by tablespoonful doses every two hours; all other drink and fluids were interdicted, and only white meats, bread and vegetables were allowed; from 100 to 200 lemons were consumed in about two weeks, and improvement commenced in a few days. The patients generally perspired freely at night; the urine was increased, in some cases, to two and a half or three or even six quarts per day; if constipation was present, loose stools occurred; if debilitating or even colliquative diarrhoea was present, it diminished as the action of the remedy on the skin and kidneys increased. It seemed to be especially useful when dropsy of the chest and œdema of the lungs were present; when the face, hands, feet, and limbs were bloated; when ascites was present, and the patient was unable to lie down from dropsy of the chest, and had repeated attacks of suffocative oppression from œdema of the lungs. It probably acts in the same way as cream of tartar, citrate of potash, and acetate of ammonia, and may be most usefully employed as a common drink, when other remedies are used or required.

*Bitartrate of potash, or cream of tartar.*—Bennet, of Edinburgh, has distinguished himself by his warm advocacy of this remedy in Bright's disease; he regards it as the most valuable of the whole class of laxatives and diuretics; and has frequently seen it produce the most powerful effects when every other had failed. He has known cream of tartar to operate after digitalis and other remedies had proved useless; sometimes, also, after it had been given without effect at an early period of the dis-



ease, it has succeeded remarkably well at a later one, which warrants our having recourse to the remedy again and again, after certain intervals, should it not act at first. He has rarely seen other diuretics succeed when repeated attempts by means of the bitartrate had failed. In full doses it acts as a refrigerant, laxative and diuretic, and, while other purgatives augment renal, hemorrhoidal and menstrual hemorrhages, this one moderates and even arrests them. Combined with jalap it forms an efficient hydragogue cathartic, which, in some forms of dropsy, and in simple anasarca particularly, is rapid and decided in its action. Stille recommends twelve grains of jalap, thoroughly triturated with thirty of cream of tartar, as a certain and not disagreeable purgative. But the resin of jalap in a pill, with one quarter or one half grain of podophyllin, is more efficient when aided by the free use of cream of tartar water, with or without juniper berries, with which it is often associated. One half ounce each of cream of tartar and bruised juniper berries, in a pint of boiling water, is one of the most efficient combinations in the passive forms of general dropsy. In the form which so often occurs as a sequela of scarlatina it is of great service, either alone or combined with tincture of digitalis.

Finally, Goodfellow prefers the compound magnesia draught of the Middlesex Hospital, viz.: magnes. carb., five or ten grains, magnes. sulph., 3i., given in peppermint water several times a day; he says he never loses a case of the recent acute form of Bright's disease. Occasionally a small quantity of tartar emetic is added.







